

REMARKS

The Official Action mailed July 23, 2002 has been received and its contents carefully noted. Filed concurrently herewith is a *Request for One Month Extension of Time*, which extends the shortened statutory period for response to November 23, 2002. Accordingly, Applicant respectfully submits that this response is being timely filed.

Applicants note with appreciation the partial consideration of the Information Disclosure Statement filed on October 25, 2000. However Applicants note that the Examiner has not considered the foreign reference and articles submitted therewith. Applicants respectfully request the Examiner to provide an initialed copy of the Form PTO-1449 evidencing consideration of such references. A further Information Disclosure Statement is submitted herewith and careful review and consideration of this Information Disclosure Statement is requested.

Claims 1-18 are pending in the present application, of which claims 1, 4, 7, 10, 13 and 16 are independent. For the reasons set forth in detail below, all claims are believed to be in condition for allowance.

Paragraph 1 of the Official Action objects to claims 2, 5, 8, 11, 14 and 17 due to minor typographical errors. Specifically, the term "methal" should read as "metal." Applicants have amended these claims as required.

Paragraph 2 of the Official Action rejects claims 1-18 as obvious based on the combination of U.S. Patent No. 5,147,826 to Liu et al. and U.S. Patent No. 5,512,320 to Turner et al. The Applicants respectfully traverse the rejection because the Official Action has not made a *prima facie* case of obviousness.

As stated in MPEP §§ 2143-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the

references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims. Liu does not teach or suggest the step of forming a crystallization promoting material in contact with a semiconductor film and a step of crystallizing the semiconductor film successively in a same chamber which is not exposed to air. In fact, the Liu method is preferably exposed to an oxygen atmosphere or ambient (claim 8; col. 4, lines 18-21; col. 5, lines 8-12, 58-60). Turner does not teach or suggest anything related to crystallization. Since Liu and Turner do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained.

Furthermore, there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify Liu and Turner or to combine reference teachings to achieve the claimed invention. The Turner apparatus does not relate to the Liu process. The Official Action argues that the Turner apparatus relates to the Liu process since the Turner apparatus is for depositing sequential thin films on glass substrates (p. 5, Paper No. 10). However, the Turner apparatus does not discuss crystallization. There is no teaching in either Liu or Turner to suggest modifying the Turner device to include the additional step of crystallization and to also suggest modifying the Liu method to perform all Liu method steps in a chamber that is not exposed to air. Even if one accepts that one would be motivated to perform the Liu method in the Turner apparatus in order to achieve "increased throughput" and a "cleaner system," there is still no motivation or teaching to modify the Turner apparatus to be suitable for crystallization.

In order to combine Liu and Turner to achieve the present invention, there would also have to be a teaching in the references that suggests removing the Liu

crystallization step which, according to Liu, is preferably performed in an oxygen atmosphere or ambient. No such teaching exists in Liu or Turner, and if it did, the Liu method would no longer function properly.

Even assuming motivation could be found, the Official Action has not given any indication that one with ordinary skill in the art at the time of the invention would have had a reasonable expectation of success when combining Liu and Turner. The Official Action argues that one with ordinary skill in the art would have had a reasonable expectation of success since "Turner et al. obviously teaches an apparatus useful to mass produce the glass substrate panels taught in the process of Liu et al., for display products" (Id.). This argument ignores the fact that Turner has nothing to do with crystallization and does not address the fact that Liu is preferably performed in an oxygen atmosphere.


The Applicants further contend that even assuming, *arguendo*, that the combination of Liu and Turner is proper, there is a lack of suggestion as to why a skilled artisan would use the proposed modifications to achieve the unobvious advantages first recognized by the Applicants. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. The Applicants respectfully submit that the combination proposed by the Official Action is not even suggested by the prior art references, much less shown to be desirable.

In the present application, it is respectfully submitted that the prior art of record, alone or in combination, does not expressly or impliedly suggest the claimed invention and the Official Action has not presented a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.

Accordingly, reconsideration and withdrawal of the rejection of independent claims 1, 4, 7, 10, 13 and 16 under 35 U.S.C. § 103(a) is in order and respectfully requested. Likewise, it is believed that dependent claims 2, 3, 5, 6, 8, 9, 11, 12, 14, 15, 17 and 18 are allowable in that they depend from what is believed to be allowable base claims 1, 4, 7, 10, 13 and 16.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact Applicant's undersigned attorney at the telephone number listed below.

Respectfully submitted,



Eric J. Robinson
Reg. No. 38,285

Robinson Intellectual Property Law Office, P.C.
PMB 955
21010 Southbank Street
Potomac Falls, Virginia 20165
(571) 434-6789

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please amend claims 2, 5, 8, 11, 14 and 17 as follows:

2. (Amended) The method according to claim 1 wherein said [methal] metal is selected from the group consisting of Ni, Pd, Pt, Cu, Ag, Au, In, Sn, and Sb.

5. (Amended) The method according to claim 4 wherein said [methal] metal is selected from the group consisting of Ni, Pd, Pt, Cu, Ag, Au, In, Sn, and Sb.

8. (Amended) The method according to claim 7 wherein said [methal] metal is selected from the group consisting of Ni, Pd, Pt, Cu, Ag, Au, In, Sn, and Sb.

11. (Amended) The method according to claim 10 wherein said [methal] metal is selected from the group consisting of Ni, Pd, Pt, Cu, Ag, Au, In, Sn, and Sb.

14. (Amended) The method according to claim 13 wherein said [methal] metal is selected from the group consisting of Ni, Pd, Pt, Cu, Ag, Au, In, Sn, and Sb.

17. (Amended) The method according to claim 16 wherein said [methal] metal is selected from the group consisting of Ni, Pd, Pt, Cu, Ag, Au, In, Sn, and Sb.